

REMARKS

Claims 1-3, 5-10, 12, 13, 15 and 16 stand rejected under 35 U.S.C. §112, first paragraph, as being non-enabling. Claims 1, 8 and 16 have been amended to recite that the second underlayer has a larger sum total content of elements, other than Cr, than the first underlayer. In other words, the phrase “other than Cr and Ti,” have been changed to “other than Cr” to delete subject matter indicated to be new. Withdrawal of the rejection is respectfully requested.

Claims 1, 8 and 16 have also been amended to recite that the second underlayer includes at least one element selected from a group consisting of Mo, W, V and Ta, to traverse the rejection based on references cited in the previous Office Action, which the Examiner has indicated would be reasserted if the §112, first paragraph, rejection in the current Office Action is overcome.

In the previous Office Action mailed June 7, 2004, claims 1-3, 5, 8-10, 12 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda in view of Malhotra and Bian. As acknowledged by the Examiner, Matsuda does not teach the dual underlayer, and Matsuda as modified by Malhotra fails to teach a second underlayer that contains larger amounts of elements, other than Cr, than the first underlayer. The Examiner asserted, however, that since the Ti content of a $\text{Cr}_{93}\text{Ti}_7$ seed layer is larger than the Ti content of a $\text{Cr}_{90}\text{Ti}_{10}$ underlayer (that is, $\text{Ti}_7 < \text{Ti}_{10}$) in Bian, Bian teaches the feature of the second underlayer having a larger sum total content of elements other than Cr than the first underlayer.

Claims 1, 8 and 16 now recite that the second underlayer includes at least one element selected from a group consisting of Mo, W, V and Ta. In other words, Ti is excluded from the group of elements that may be used for the second underlayer. Hence, the features of the second


underlayer having a larger sum total content of elements, other than Cr, than the first underlayer indicates that the sum total content of elements (at least one element from Mo, W, V and Ta) is larger than that of the first underlayer. This feature is not taught or suggested by Bian. Accordingly, it is believed that claims 1-3, 6-10, 13, 15 and 16 are allowable over Matsuda, Malhotra and Bian.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. Should the Examiner be of the opinion that a telephone conference would aid in the prosecution of the application, or that outstanding issues exist, the Examiner is invited to contact the undersigned.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By


B. Joe Kim
Registration No. 41,895

January 5, 2004

Suite 2500
300 South Wacker Drive
Chicago, Illinois 60606
(312) 360-0080
Customer No. 24978
P:\DOCS\0941\65172\799390.DOC